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10/521,624	01/14/2005	Tatsuya Igarashi	450100-05082	2019

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EXAMINER	
KHANNA, MADHU	
ART UNIT	PAPER NUMBER
4117	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/521,624	IGARASHI ET AL.	
	Examiner	Art Unit	
	Madhu Khanna	4117	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01/14/2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *01/14/2005 and 12/05/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The information disclosure statement filed 01/14/2005 (Document # JP 3-123137) fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance in accordance requirements set forth on 37 CFR 1.56(c) regarding the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

2. The disclosure is objected to because of the following informalities:

Pages 20 and 24 contain the statement "If the number of registered MAC addresses < the limit number of registration: N is not established". In both cases, this is not consistent with the previous paragraph. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this case, claim 1 recites the clause, "a MAC addresses of an access requesting client is registered until the number of said MAC address reaches a defined limit number of

registration". It is unclear whether, a client is registering one MAC address, a client is registering a plurality of MAC addresses or each of a plurality of clients each is registering one MAC address. For purposes of examination, inlight of the specification, it has been interpreted as: one MAC address for each access requesting client is registered until the number of requesting clients results in the number of said MAC addresses reaching a defined limit of registration.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

In this case, computer-related inventions whether descriptive or functionally descriptive material are non-statutory categories when claimed as descriptive material *per se* (see *Warmerdam, 33 F.3d at 1360 USPQ2d at 1759)*, falling under the "process" category (i.e. inventions at that consist of a series of steps or acts to be performed). See 35 U.S.C. 100(b) ("The term process means, art, or method, and includes a new of a known process, machine, manufacture, composition of matter or material"). Functional descriptive material: "data structures" representing descriptive material *per se* or computer program representing computer listing *per se* (i.e. software per se) when embodied in a computer-readable media are still not statutory because they are not capable of causing functional change in the computer. However, a claimed computer-readable *storage* medium encoded with a data structure, computer listing or

computer program, having defined structural and functional interrelationships between the data structure, computer listing or computer program and the computer software and hardware component, which permit the data structure's, listing or program's functionality to be realized, is statutory (see MPEP §2106).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 4-6, and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trisno et al. (US 7,096,257) (referred to as Trisno hereafter) in view of Barrett (US 6,832,321) and in further view of Kagawa (US 2002/0169937).

Regarding claim 1, Trisno teaches

a memory section storing an address table (column 2 lines 58-60) in which a manually (e.g. by administrator or other) registered client address (e.g. network address) (column 7 lines 32-34) and an automatically registered client address (column 2 lines 51-55) are registered in forms to be able to distinguish each other (e.g. recognizes the network addresses that have been manually configured, column 7 lines 41-45).

However, although Trisno teaches nodes coupled on a network being configured with addresses, Trisno does not teach registration modes "access control modes", wherein said modes, one allows a client/node to manually register a MAC address and another mode allows a client/node to automatically register a MAC address.

Barrett teaches an information processing apparatus (access server) for executing an access control process, the apparatus characterized by comprising:

an access control section ("Firewall Options" dialog box) for executing different access control processes (e.g. the predefined security settings include a setting in which all inbound connections are blocked, a setting in which inbound connections from unknown addresses are blocked, and a setting in which all inbound connections are allowed), in response to an access request from a client (inbound connection) (column 8 lines 20-35), in accordance with an access control mode (security settings) set in said information processing apparatus (maintained by an access server) (column 5 lines 51-59) being a registered device access control mode (the security level field indicates that the allowed list should be consulted, column 9 lines 55-56), wherein

said access control section has a structure in that:

if said access control mode (security setting) set in said information processing apparatus (access server) is said registered device access control mode (the security level field indicates

that the allowed list should be consulted), said access control process for allowing said access from said client (requested inbound connection) is executed under the condition that said address of said access requesting client (packet making the request) is registered in said address table as manually registered address (allowed list) (column 9 lines 55-62).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention given the system/method of Trisno for assigning the nodes in a network an address, the teachings of Barrett for controlling which outside connection requests are allowed access to the nodes and network. One would be motivated to combine these teachings because in doing so the network of nodes would be secure by allowing a user to restrict outside access to only desired devices and/or clients.

However, although the above prior art does teach the access control mode (security setting) set in said information processing apparatus (access server) is automatic registration access control mode (Barrett: if such a request is received by the access server, the destination address of the outside computer is added to a list of destination addresses with which the client computer has established outbound connections (referred to as the "previous connections list"), column 8 line 59-67 - column 9 lines 1-4); Trisno-Barrett do not teach the automatic registration access control mode being executed as a result of an access request.

Kagawa teaches one MAC address for each access requesting client (source MAC address of a packet is inputted, [0029]) is registered until the number of requesting clients results in the number of said MAC addresses reaching a defined limit of registration (when available memory space exists in the four accessed memory areas, the source MAC address is registered as a new address [0033]): N of said MAC address table (maximum number of entries, [0024]), and

said access control process for allowing said access from said client is executed under the condition of said registration process (steps S201-S206 in Fig. 3).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention given the desirability of Trisno-Barrett to efficiently assign addresses to nodes on a network and protect these nodes by limiting access to select outside devices based on various security levels, the teachings of Kagawa for improving management of a table containing information regarding the outside devices. One of ordinary skill pertaining network access would recognize that maintaining an updated list of MAC addresses, or any other type of address identifier, accessing the network would allow for improved security preferences. One would be motivated to combine these teachings because in doing so the access server could better manage security setting by utilizing the information of an organized table which uses hashing to store information regarding each devices address.

Regarding claim 4, a registration processing section for executing a process for registering a client (node) address (Trisno: network addresses for one or more of the nodes are manually configured, column 7 lines 32-34) in address table as said manually registered client address (Trisno: set the network address with the manually configured network address, column 7 lines 37-41) under the condition that a manual registration process in accordance with a predefined address registration process sequence is executed (Trisno: manually configuration by a network administrator or other user, column 7 lines 32-34).

Regarding claim 5, a registration processing section for executing a setting change process for changing an entry of said automatically registered client address (Trisno: each node assigns the network addresses in a common predetermined manner, column 2 lines 51-55) to an entry of said manually registered client address in said address table (Trisno: manually configured network address, column 7 lines 34-37), under the condition that a manual registration process in accordance with a predefined address registration process sequence is executed for an address registered as said automatically registered client address in said address table (Trisno: the network addresses for one or more of the nodes are manually configured by a network administrator or other user, column 7 lines 32-34).

Regarding claim 6, this method claim comprises limitation(s) substantially the same as those discussed on claim 1, same rationale of rejection is applicable, wherein the access control mode must be determined.

Regarding claim 9, this method claim comprises limitation(s) substantially the same as those discussed on claim 4, same rationale of rejection is applicable.

Regarding claim 10, this method claim comprises limitation(s) substantially the same as those discussed on claim 5, same rationale of rejection is applicable.

Regarding claim 11, this computer program claim comprises limitation(s) substantially the same as those discussed on claim 1, same rationale of rejection is applicable, wherein the access control mode must be determined.

8. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trisno-Barrett-Kagawa in view of Renda et al. (US 7,127,524) (referred to as Renda hereafter).

Regarding claim 2, Trisno-Barrett-Kagawa teach that if said access control mode (Barrett: security settings) set in said information processing apparatus (Barrett: access server) is said automatic registration access control mode,

said access control section registers said MAC address of said client up to said defined limit number of registration (Kagawa: when available memory space exists in the four accessed memory areas, the source MAC address is registered as a new address [0033]): N of said MAC address table (Kagawa: maximum number of entries, [0024]), and executes said access control process for allowing said access from said client under the condition of said registration process (Kagawa: S201-S206 of FIG. 3).

However, although Trisno-Barrett-Kagawa teach identifying the type of access request by disclosing that the user can specify certain types of connections to block or allow (Barrett: column 8 lines 37-42), Trisno-Barrett-Kagawa do not teach registering the address only if the access request corresponds to the type of request to which access control should be executed.

Renda teaches identifying the type of said access request (target corresponds to what the user is trying to do) from said client (user) and only registering the address (action) in the case

where the type of said identified said access request (target) corresponds to the type of access request (target) to which access control should be executed (action) (certain privileges for a user have a target and an action, column 8 lines 59-67).

It would have been obvious to one of ordinary skill in the art at the time of the claimed invention given the system/method of Trisno-Barrett-Kagawa for improving management of access to a network of nodes by giving the user a range of security levels and maintaining an functional table of device MAC addresses associated with the network, the teachings of Renda for improved control of access to a network. One of ordinary skill would recognize that intercepting client device requests to verify privileges based on the sending devices address before forwarding the request to their destinations would further filter undesired access to the network while additionally having the option of forwarding the request to an alternative destination. One would be motivated to combine these teaching because in doing so the security of network access based on a table of MAC addresses would be enhanced by giving the administrator more options regarding how requests are handled or redirected if the client devices privileges are not sufficient to grant the request.

Regarding claim 7, this method claim comprises limitation(s) substantially the same as those discussed on claim 2, same rationale of rejection is applicable, wherein the executed access control must be predefined.

9. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trisno-Barrett-Kagawa-Renda in view of Fielding et al. (Hypertext Transfer Protocol – HTTP/1.1) (referred to as RFC 2616 hereafter).

Regarding claim 3, Trisno-Barrett-Kagawa-Renda teach said type of access request to which said access control should be executed includes at least one of a content request process based on an HTTP (Hyper Text Transfer Protocol) method and a control request process based on a SOAP (Simple Object Access Protocol) (Renda: targets having a destination port corresponding to the HTTP protocol, column 23 lines 40-41). However, Trisno-Barrett-Kagawa-Renda do not teach the HTTP content request process being based on exclusively the HTTP-GET method.

RFC 2616 teaches the HTTP-GET (The GET method means retrieve whatever information is identified by the Request-URL, section 9.3).

It would have been obvious to one of ordinary skill at the time of the claimed invention given the teachings of Trisno-Barrett-Kagawa-Renda for regulating network access for requests based on HTTP protocol, the teachings of RFC 2616 regarding HTTP-GET. One of ordinary skill would recognize that the HTTP-GET is a standard method utilized for HTTP requests and therefore would be motivated to combine these teaching.

Regarding claim 8, this method claim comprises limitation(s) substantially the same as those discussed on claim 3, same rationale of rejection is applicable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Madhu Khanna whose telephone number is 571-270-3629. The examiner can normally be reached on Mon-Thurs 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beatriz Prieto can be reached on 571-272-3902. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. K./
Examiner
Art Unit 4117

/Prieto B./
Supervisory Patent Examiner, Art Unit 4117